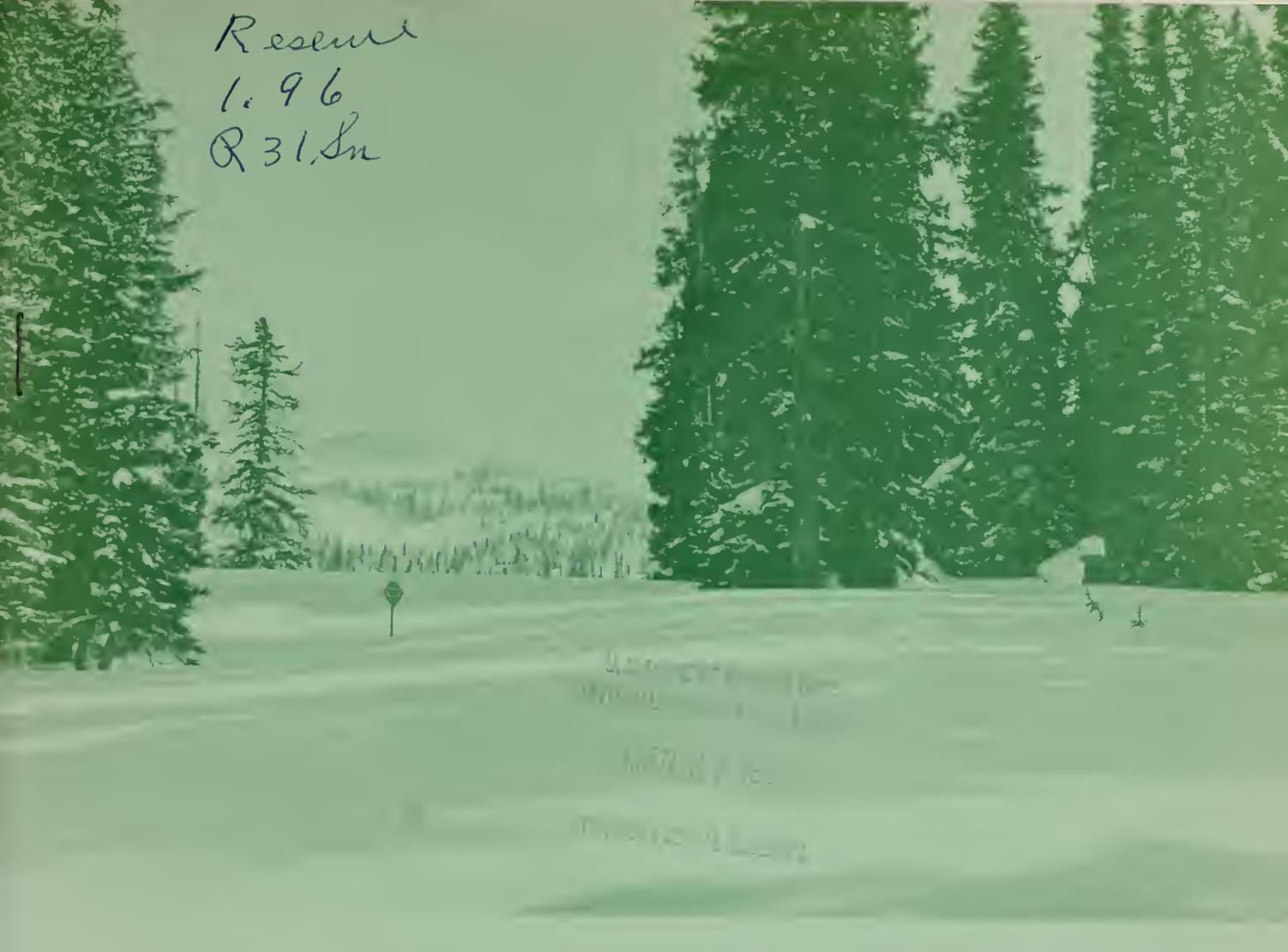


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WATER SUPPLY OUTLOOK FOR ARIZONA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE - SOIL CONSERVATION SERVICE,
SALT RIVER VALLEY WATER USERS ASSOCIATION
and
ARIZONA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies
named above in cooperation with the Federal, State and pri-
vate organizations listed on the last page of this report.

AS OF
MAR. 15, 1968

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 Federal Office Building, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR ARIZONA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

D. A. WILLIAMS
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D C

|||||

Released by

M. D. BURDICK
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PHOENIX, ARIZONA

|||||

In Cooperation with

RICHARD K. FREVERT
DIRECTOR
ARIZONA AGRICULTURAL
EXPERIMENT STATION

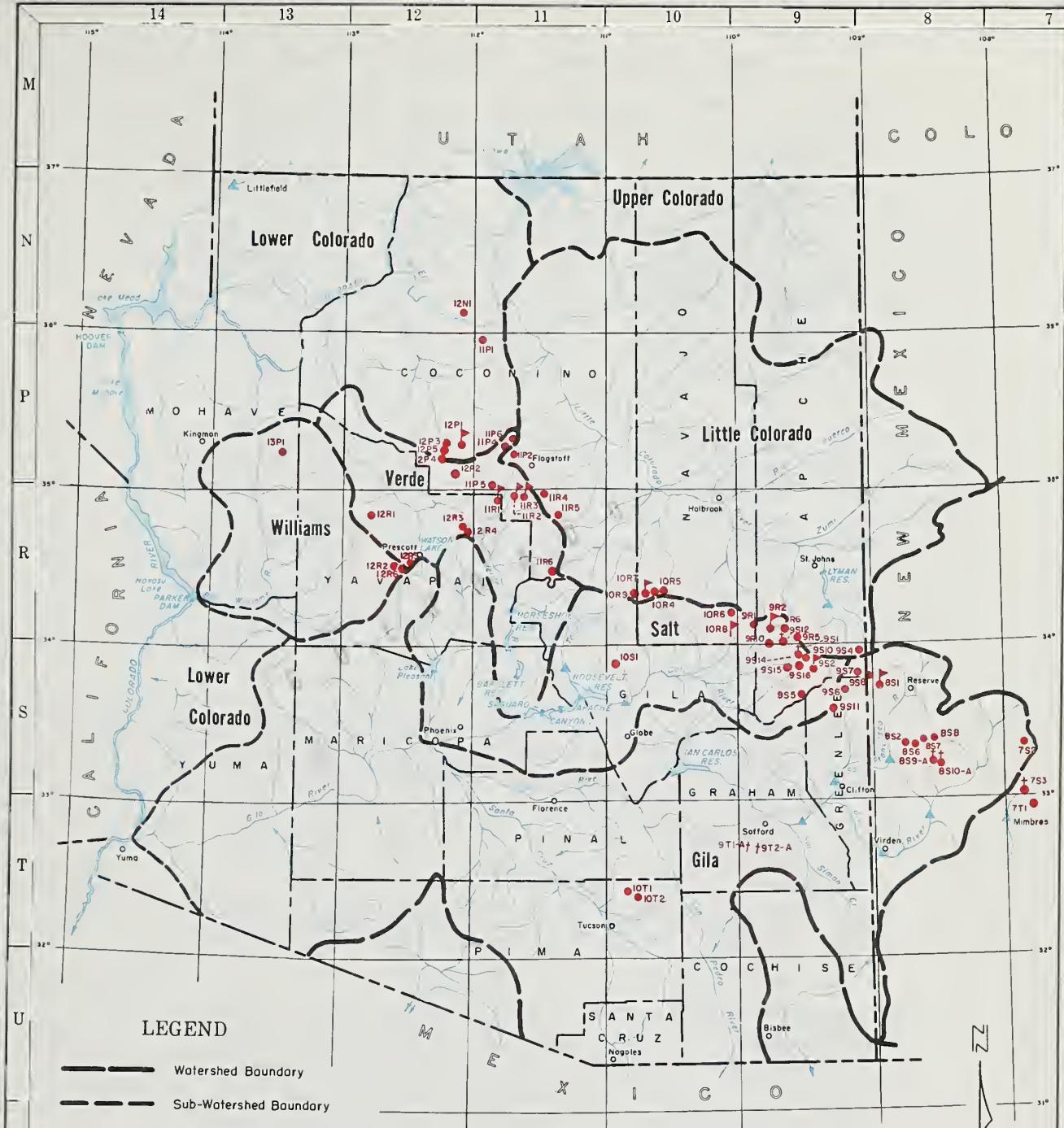
VICTOR I. CORBELL
PRESIDENT
SALT RIVER VALLEY WATER
USERS ASSOCIATION

|||||

Report prepared by

RICHARD W. ENZ, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
ROOM 6029 FEDERAL BUILDING
PHOENIX, ARIZONA 85025



**ARIZONA
COOPERATIVE SNOW SURVEYS**
Snow Courses and Sub-Watersheds

25 0 25 50 75
SCALE IN MILES

INDEX to SNOW COURSES and SOIL MOISTURE STATIONS

<u>Number</u>	<u>Name</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>Elevation</u>	<u>River Basin</u>
11R6	Baker Butte (p)	4	12N	9E	7300	Verde
9S1	Baldy (p)	28	7N	27E	9125	Little Colorado
9S15	Baldy #2	12	6N	26E	10000	Little Colorado
9S16	Baldy #3	13	6N	26E	11000	Little Colorado
10T1	Bear Wallow	6	12S	16E	8100	Gila
12P5	Bill Williams Intermediate	17	21N	2E	8550	Lower Colorado
12P4	Bill Williams Summit	17	21N	2E	8950	Lower Colorado
9S6	Beaver Head	13	4N	30E	8000	San Francisco
9S10-*	Black River Divide	10	6N	27E	9400	Salt
12N1	Bright Angel	34	33N	3E	8400	Lower Colorado
12R1	Camp Wood	3	16N	6W	5700	Verde
10R7-M	Canyon Creek #2	18	11N	15E	7500	Little Colorado
10R9	Canyon Point (p)	28	11N	14E	7600	Salt
11R2-M	Casner Park	19	18N	8E	6930	Verde
12P1-M	Chalender	27	22N	3E	7100	Verde
12R6	Copper Basin Divide (p)	23	13N	3W	6720	Verde
10R8-*	Corduroy Creek	4	8N	21E	6000	Salt
9S7	Coronado Trail	26	5N	30E	8000	San Francisco
9T2-A	Crazy Horse	34	8S	24E	10200	Gila
7T1	Emory Pass #1	16	16S	9W**	7800	Mimbres
7T2	Emory Pass #2	16	16S	9W**	7800	Mimbres
10R6	Forest Dale	2	9N	21E	6430	Salt
11P2	Fort Valley (p)	22	22N	6E	7350	Little Colorado
9R5	Ft. Apache	18	7N	27E	9160	Little Colorado
8S1-M	Frisco Divide	31	6S	20W**	8000	San Francisco
12R4	Gaddes Canyon	11	15N	2E	7600	Verde
10R5	Gentry	36	11N	15E	7650	Salt
11P1	Grand Canyon	21	30N	4E	7500	Lower Colorado
9S11	Hannagan Meadows (p)	19	3N	29E	9090	Salt
11R5	Happy Jack	30	17N	9E	7630	Verde
9R10	Hawley Lake	13	7N	24E	8300	Salt
10R4	Heber (p)	28	11N	15E	7600	Little Colorado
9T1-A	High Peak	34	8S	24E	10500	Gila
8S9-A	Hummingbird	19	11S	17W**	10550	San Francisco
8S6	Ice King	6	11S	18W**	8020	San Francisco
7S2	Inman	6	11S	10W**	7800	Gila
12R2	Iron Springs	22	14N	3W	6200	Bill Williams
9S2	Maverick Fork (p)	13	6N	27E	9150	Salt
7S3-A	McKnight Cabin	10	15S	10W**	9300	Mimbres
9R2-M	McNary	23	8N	23E	7200	Salt
9R1	Milk Ranch	33	8N	23E	7000	Salt
12R3	Mingus Mountain	3	15N	2E	7100	Verde
8S2	Mogollon	2	11S	19W**	7000	San Francisco
11R4	Mormon Lake	13	18N	8E	7350	Little Colorado
11R3-M	Mormon Mountain (p)	14	18N	8E	7500	Verde
9S12-A	Mt. Ord	4	6N	26E	11000	Salt
11R1-M	Munds Park	15	18N	7E	6500	Verde
11P5-M	Newman Park	25	19N	6E	6750	Verde
9S4	Nutrioso	23	6N	30E	8500	San Francisco
9S5	Pacheta	27	4-1/2N	27E	7800	Salt
8S7	Redstone Trail	5	11S	18W**	8600	San Francisco
10T2	Rose Canyon	15	12S	16E	7300	Gila
8S8	Silver Creek Divide	4	11S	18W**	9000	San Francisco
9S14-A	Smith Cienega	10	6N	26E	9850	Salt
11P4	Snow Bowl #1 (p)	36	23N	6E	10260	Verde
11P6	Snow Bowl #2	31	23N	7E	11000	Verde
9S8	State Line	6	6S	21W**	8000	San Francisco
12R5	White Spar	19	13N	2W	6000	Verde
12P2	White Horse Lake Jct	2	20N	2E	7150	Verde
8S10-A	Whitewater	19	11S	17W**	10750	Gila
12P3	Williams Ski Run	9	21N	2E	7720	Lower Colorado
13P1	Willow Ranch	16	21N	11W	5000	Bill Williams
9R6	Wilson Lake (p)	4	7N	26E	9000	Salt
10S1	Workman Creek	33	6N	14E	6900	Salt

M SOIL MOISTURE STA.

(p) STORAGE GAGE

A AERIAL SNOW DEPTH MARKER

** SOIL MOISTURE STA. ONLY

** NM PRINCIPAL MERIDIAN

ARIZONA WATER SUPPLY OUTLOOK

MARCH 15, 1968

SNOW COVER

As a result of the storm of March 8 to 10, snow cover increased on the Salt River Watershed to over twice normal for this date. Snow cover dropped slightly at the lower elevations on the Gila Watershed, but increased substantially above 9,000'. The snow pack there is now over 3 times average. On the Verde Watershed there was a significant reduction in snow cover as temperatures were warm and snowfall was light. The annual ski trip up Mt. Baldy revealed 8-1/2 feet of snow containing almost 40 inches of water above the 11,000' level. Conditions are similar in the Mogollon Mts., based on aerial flights and previous ground measurements.

PRECIPITATION

The storm of March 8 to 10 resulted in heavy precipitation along the Rim, in the White Mts. and in the Mogollon Mts. Close to 4" fell at Silver Creek Divide and Workman Creek with 2 to 2-1/2" at most other stations. On the Verde Watershed, however, mountain precipitation averaged slightly less than 1-1/2".

SOIL MOISTURE

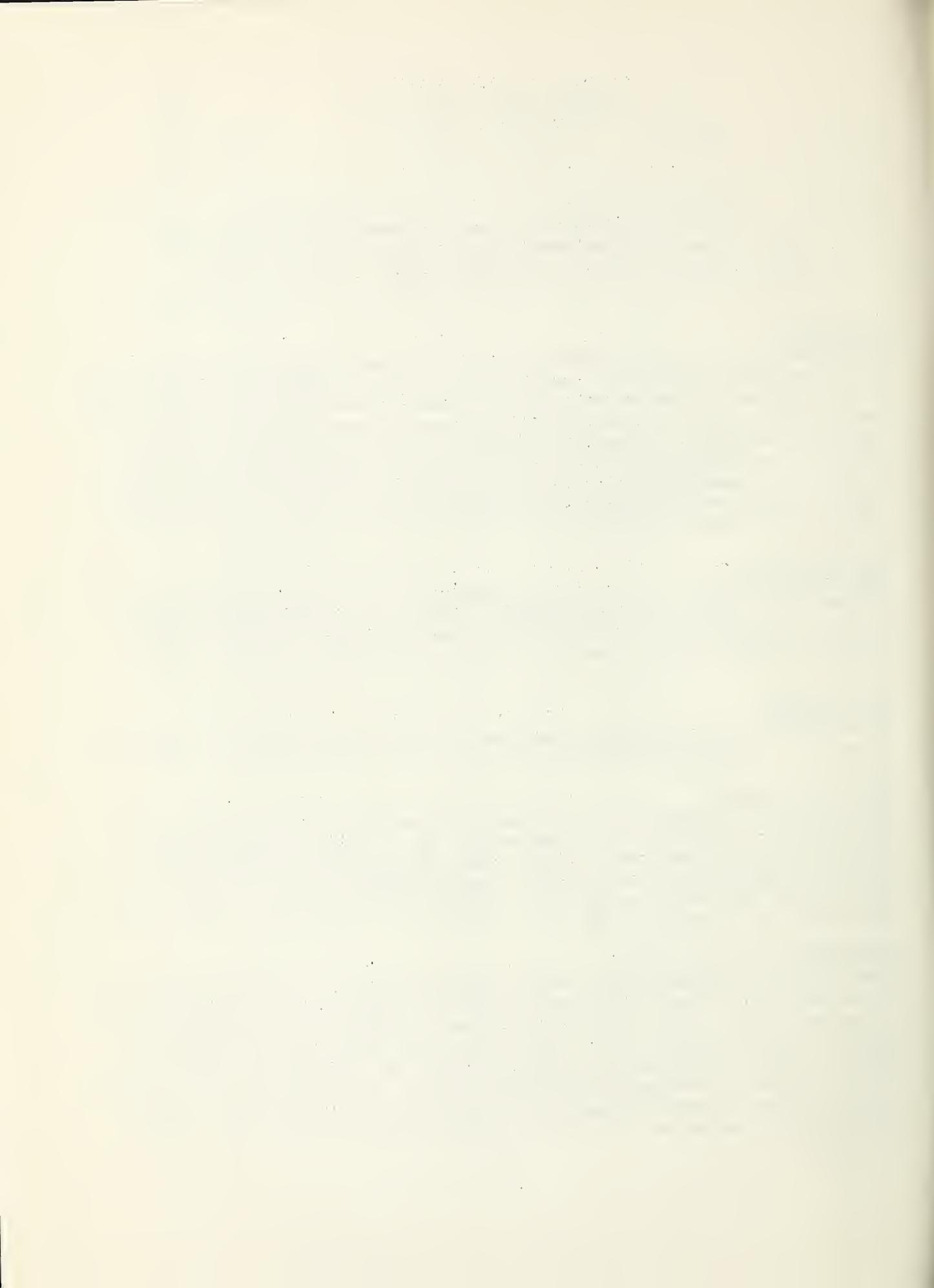
Below 7,000', soils are drying, but are still much above average. Above this level most soils are near field capacity.

RESERVOIR STORAGE

With reservoir storage at 96% of capacity on the Salt River Project, this is the most water ever held in storage on this date. Outflow is being carefully regulated to maintain as high a level as possible consistent with protection against high peak inflow. San Carlos Reservoir, containing 7.5 times normal for this date, is at its highest level since 1942. Most other reservoirs in the state are full.

STREAMFLOW AND WATER SUPPLY

Heavy runoff continues on all streams, but the probability of high peak flows is rapidly diminishing, as the end of the winter precipitation period is only a few weeks away. During the first 15 days of March the Salt River Project streams produced 154,000 A.F., while the Gila at Safford flowed 89,000 A.F. Arizona streams are forecast to yield from 138% of average on the Verde River to 273% on the Gila during the March-May period. The Colorado River at Lake Powell Inflow, however, is expected to flow near normal this year. Water supplies are abundant on all projects with carry-over storage available for next year.



STREAMFLOW FORECASTS - MARCH 15, 1968

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts.

SUB-WATERSHED, STREAM and STATION	SEASONAL STREAMFLOW IN THOUSANDS OF ACRE FEET					
	FORECAST PERIOD: MARCH - MAY, INCLUSIVE					
	Forecast Runoff 1968	Percent 15-Year Average	Measured Runoff 1967	Measured Runoff 1966	Measured Runoff 1965	1948-62 Average
<u>SALT RIVER DRAINAGE</u>						
Salt nr. Roosevelt	500	221	47.0	483.8	396.0	226.4
Tonto Creek nr. Roosevelt	35	138	3.9	15.4	77.0	25.4
Verde River above Horseshoe	144	127	40.0	132.2	365.5	113.7
<u>GILA RIVER DRAINAGE</u>						
Gila River nr. Gila	83	234	10.4	91.1	32.6	35.5
Gila River nr. Solomon	212	273	14.4	227.7	69.4	77.7
Gila River nr. Solomon - (month of March)	120	310	6.2	148.7	30.2	38.7
Gila River nr. Virden	105	264	9.6	111.5	36.1	39.7
Frisco River at Clifton	108	267	8.3	111.0	38.8	40.5
Frisco River at Glenwood	49	283	3.1	57.5	16.4	17.3
<u>MIMBRES RIVER DRAINAGE</u>						
Mimbres River nr. Mimbres	5	185	0.7	0.7	0.7	2.7
<u>COLORADO RIVER DRAINAGE</u>						
Little Colorado River above Lyman Dam (MARCH-JUNE, Incl.)	20	230	0.7	21.2	18.6	8.7
Colorado River -- Lake Powell* Inflow (APRIL-JULY, Incl.)	8000	104	6,045.0	4600.0	11810.0	7692.0
<u>VIRGIN RIVER DRAINAGE</u>						
Virgin River nr. Littlefield (APRIL-JUNE, Incl.)	58	135	39.0	26.6	63.5	43.0
<u>GRANITE CREEK DRAINAGE</u>						
Granite Creek	1.8	---	---	---	---	---
Willow Creek	.7	---	---	---	---	---

The Gila River at Head of Safford Valley is predicted to remain above 100 cfs until August 1.

* Forecast issued by Soil Conservation Service, Salt Lake City, Utah.

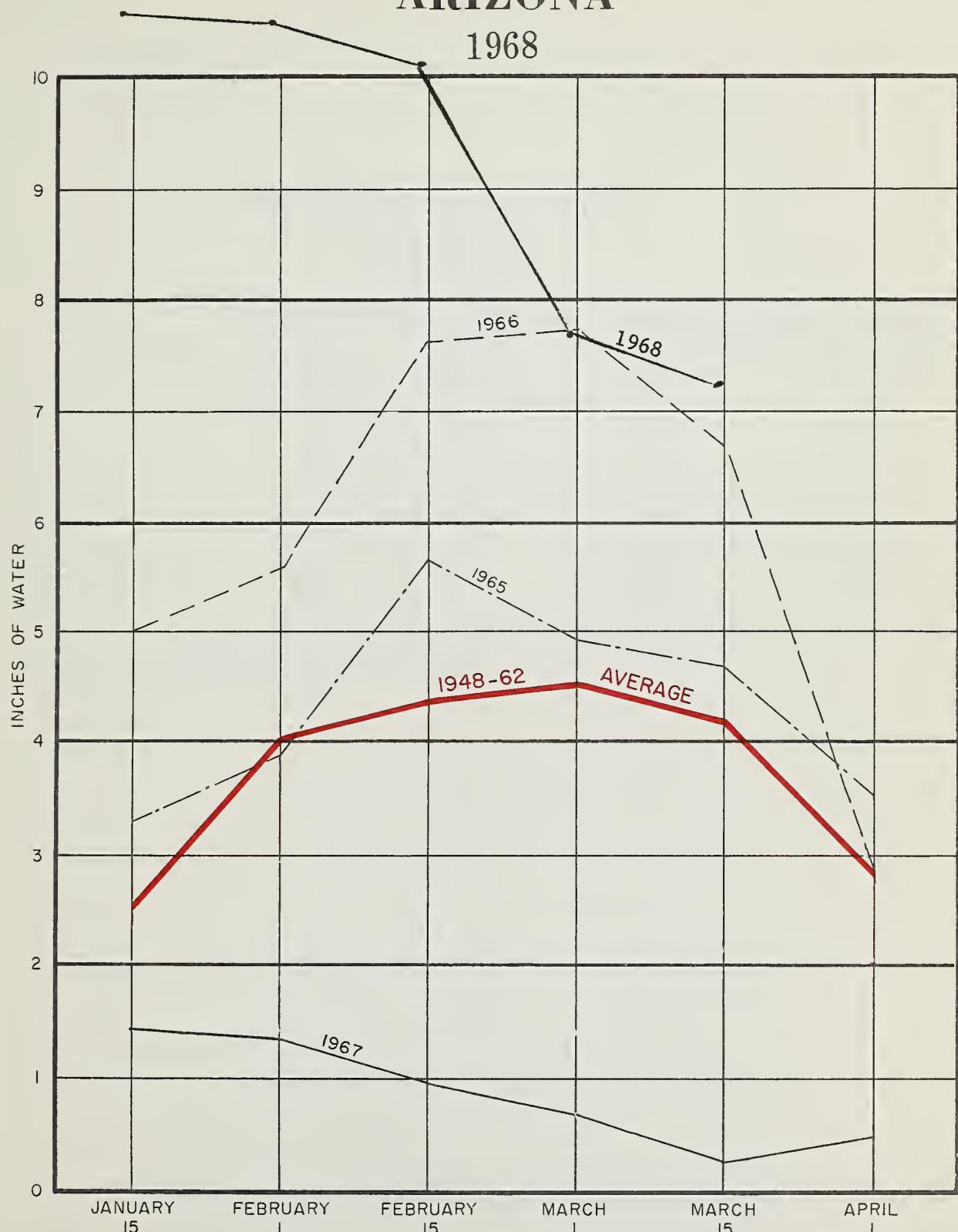


STATUS OF ARIZONA RESERVOIR STORAGE - ABOUT MARCH 15, 1968

SUB- WATERSHED and/or STREAM	RESERVOIR	USABLE CAPACITY 1000s ACRE FEET	USABLE STORAGE - 1000s ACRE FEET			15-Year Average 1948-62
			1968	1967	1966	
<u>GILA RIVER DRAINAGE</u>						
Agua Fria	Lake Pleasant	157.6	157.6	123.7	157.3	31.9
Granite	Watson Lake	4.7	4.7	3.3	4.7	---
Granite	Willow Creek	6.1	5.4	3.9	6.1	---
Gila	San Carlos	1,206.0	599.5	289.6	426.3	79.1
Verde	Bartlett	179.5	170.5	121.7	158.8	84.4
Verde	Horseshoe	142.8	130.5	29.8	139.0	27.5
Salt	Roosevelt	1,382.0	1,328.5	1,096.1	1,260.9	443.5
Salt	Apache	245.0	241.4	242.7	235.8	208.6
Salt	Canyon	58.0	56.1	51.7	51.2	48.7
Salt	Saguaro	70.0	67.1	68.4	50.2	54.8
<u>COLORADO RIVER DRAINAGE</u>						
Colorado	Lake Havasu	619.4	547.2	525.2	529.4	550.1
Colorado	Lake Mohave	1,810.0	1,715.8	1,670.0	1,726.0	1,579.7*
Colorado	Lake Mead	27,207.0	14,642.0	15,566.0	15,532.0	16,825.1
Colorado	Lake Powell	25,002.0	8,089.0	7,424.1	8,720.0	---
Little Colorado	Lyman	30.6	19.9	17.7	21.6	7.6
Little Colorado	Show Low Lake	5.1	5.1	.5	5.1	1.4*

* Average is for less than 15 years of record in the 1948-62 period.

RELATIVE SNOW WATER ACCUMULATION ARIZONA



This graph represents the average snow water content on eleven selected snow courses on Arizona Sub-Watersheds.

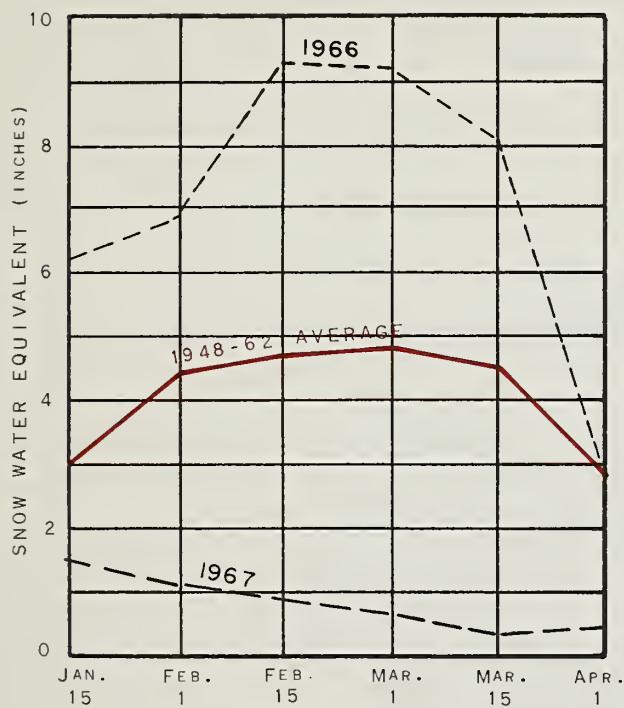
SNOW COVER ON ARIZONA WATERSHEDS

MARCH 15, 1968

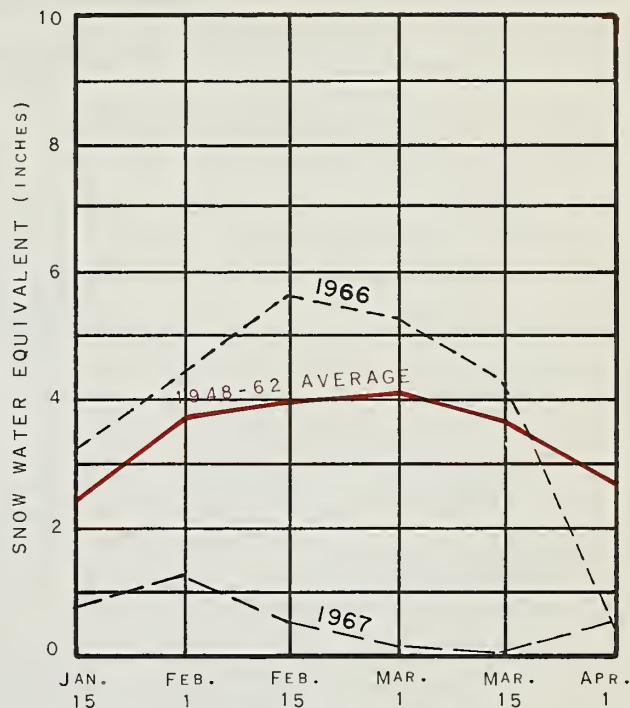
Watershed	No. of Courses Average	Water Content of Snow (Inches)	This Year's Water Content of Snow Expressed as Percent of: Last Year	Average *
Gila	7	5.3	∞	335
Salt	10	10.1	3124	213
Verde	7	5.3	∞	143
Little Colorado	4	8.7	1200	164

* Actual or Estimated 1948-62 Average.

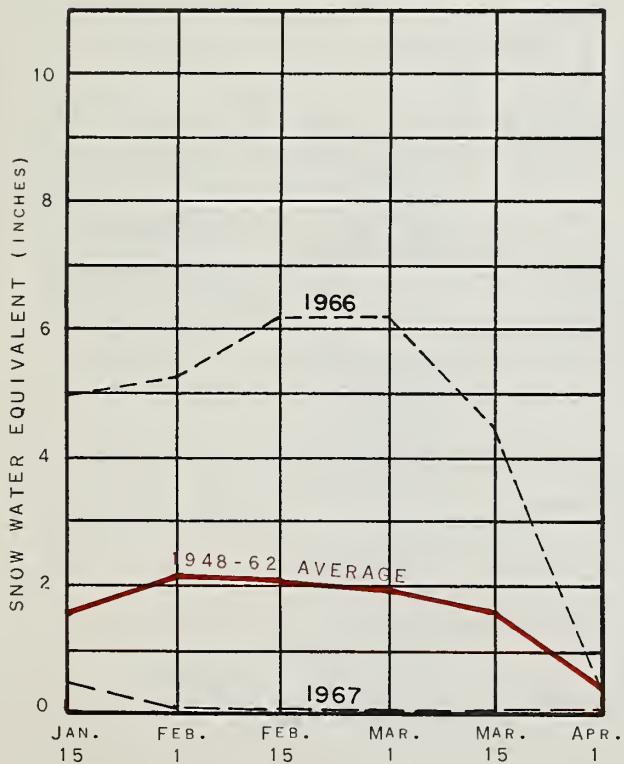
1968
ARIZONA SNOW COVER
BY WATERSHEDS



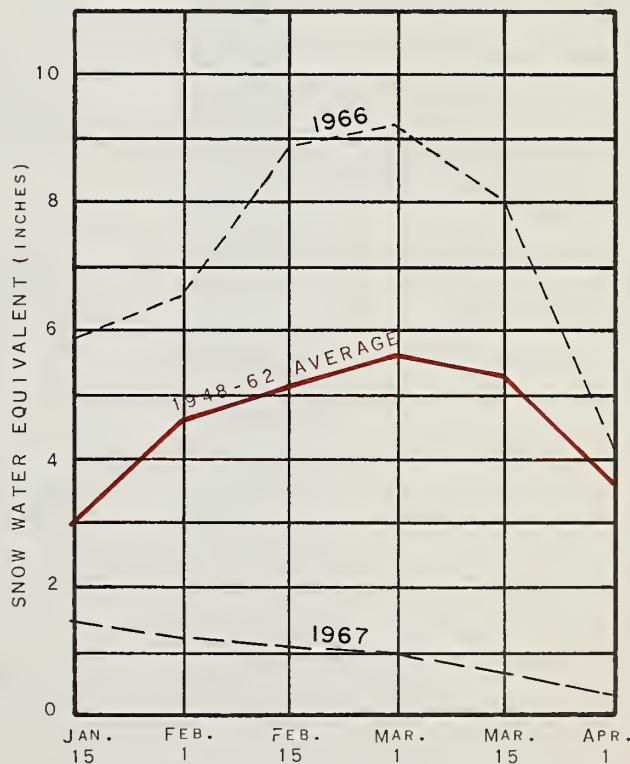
SALT RIVER



VERDE RIVER



GILA RIVER



LITTLE COLORADO RIVER

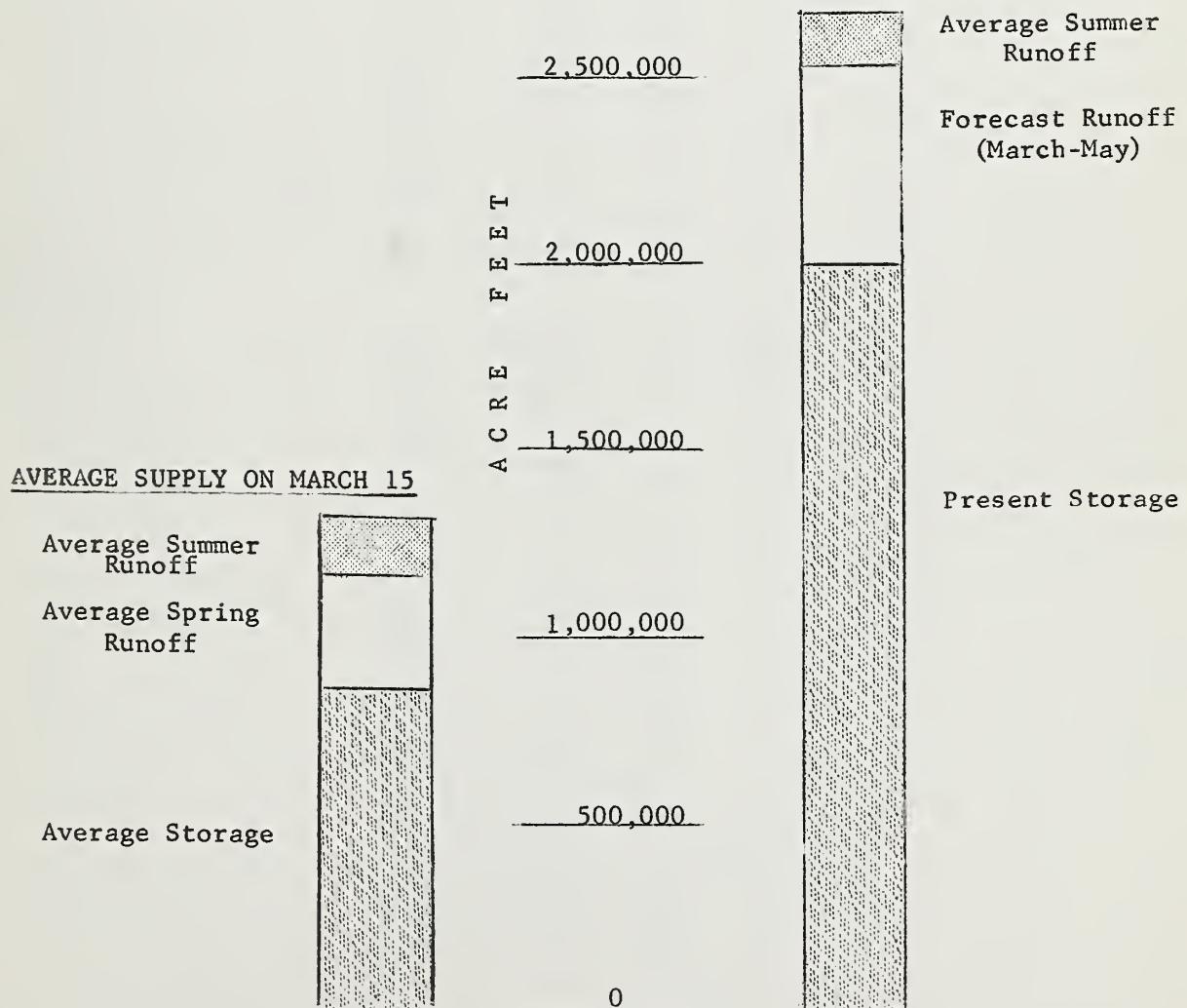
WATER SUPPLY INVENTORY

SALT RIVER VALLEY SYSTEM

MARCH 15, 1968

3,000,000

ANTICIPATED 1968 SUPPLY *



* Based on Present Storage + Forecast Spring Runoff + Average Summer Runoff.

SNOW

ABOUT MARCH 15, 1968

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (inches)	WATER CONTENT (inches)	WATER CONTENT (inches)	AVERAGE ^a

GILA RIVER

Bear Wallow	10T1	8100	3/13	41	15.3	0.0	2.8
Beaver Head	9S6	8000	3/13	23	9.6	0.0	2.5
Coronado Trail	9S7	8000	3/14	14	7.5	0.0	2.1
Crazy Horse (A)	9T2-A	10200	---	--	----	---	---
Emory Pass #1 *	7T1	7800	3/13	5	1.1	0.0	---
Emory Pass #2 *	7T2	7800	3/13	9	2.7	0.0	---
Frisco Divide	8S1-M	8000	3/14	15	6.7	0.0	1.6
Hannagan Meadows *	9S11	9090	3/13	53	17.4	0.7	---
High Peak (A)	9T1-A	10500	----	--	----	---	---
Hummingbird (A)	8S9-A	10550	3/14	89	32.5	3.8	---
Ice King	8S6	8020	3/14	38	13.1	1.0	---
Inman	7S2	7800	3/14	T	T	0.0	0.4
McKnight Cabin *	7S3-A	9300	----	--	----	0.0	---
Mogollon	8S2	7000	3/14	T	T	0.0	1.6**
Nutrioso	9S4	8500	3/14	11	5.1	0.0	1.4
Redstone Trail	8S7	8600	3/14	46	16.2	2.6	---
Rose Canyon	10T2	7300	3/13	12	4.0	0.0	1.1
Silver Creek Divide	8S8	9000	3/14	67	23.0	5.0	---
State Line	9S8	8000	3/14	20	8.3	0.0	1.5
Whitewater (A)	8S10-A	10750	3/14	108	36.0	9.4	---

SALT RIVER

Baldy #2	9S15	9750	3/12	81	28.0	---	---
Baldy #3	9S16	10950	3/13	103	38.7	---	---
Baldy *	9S1	9125	3/14	36	13.2	0.6	8.7**
Beaver Head	9S6	8000	3/13	23	9.6	0.0	2.5
Canyon Creek	10R7-M	7500	3/14	20	8.5	0.0	2.6**
Canyon Point	10R9	7600	3/14	23	9.6	0.0	---
Coronado Trail	9S7	8000	3/14	14	7.5	0.0	2.1
Forest Dale	10R6	6430	3/14	0	0.0	0.0	0.4
Ft. Apache	9R5	9160	3/14	37	12.6	2.3	9.6**
Hannagan Meadows	9S11	9090	3/13	53	17.4	0.7	---
Hawley Lake	9R10	8300	3/14	36	14.6	0.0	---
Heber	10R4	7600	3/14	25	10.6	0.0	2.5**
Maverick Fork	9S2	9050	3/14	46	16.6	0.0	11.3**
McNary	9R2-M	7200	3/14	15	3.9	0.0	1.5
Milk Ranch	9R1	7000	3/14	2	0.3	0.0	0.8
Mt. Ord (A)	9S12-A	11000	3/15	98	38.5	12.7	---
Nutrioso *	9S4	8500	3/14	11	5.1	0.0	1.4
Pacheta	9S5	7800	DISCONTINUED			0.0	2.8**
Smith Cienega (A)	9S14-A	9850	3/15	70	27.3	11.1	---
Wilson Lake	9R6	9000	3/14	48	15.4	4.9	---
Workman Creek	10S1	6900	3/13	36	16.3	0.0	3.6**

BILL WILLIAMS RIVER

Camp Wood *	12R1	5700	3/14	0	0.0	0.0	0.4
Copper Basin Divide	12R6	6720	3/14	4	1.4	0.0	---
Iron Springs	12R2	6200	3/14	0	0.0	0.0	0.7
Willow Ranch	13P1	5000	3/14	0	0.0	0.0	0.1

(a) 1948-62, 15 year period. (b) Adjacent drainage. (c) 1948-62 Adjusted Average. (A) Aerial observation. Water content estimated.

SNOW ABOUT MARCH 15, 1968			CURRENT INFORMATION			PAST RECORD	
DRAINAGE BASIN and SNOW COURSE			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^a
<u>VERDE RIVER</u>							
Baker Butte	11R6	7300	3/11	43	17.7	0.0	---
Camp Wood	12R1	5700	3/14	0	0.0	0.0	0.4
Chalender	12P1-M	7100	3/14	4	1.6	0.0	2.8
Copper Basin Divide	12R6	6720	3/14	4	1.4	0.0	---
Fort Valley	11P2	7350	3/14	7	2.9	0.0	2.1
Gaddes Canyon	12R4	7600	3/14	32	12.8	0.0	6.2**
Happy Jack	11R5	7630	3/16	14	6.1	0.0	3.2**
Iron Springs *	12R2	6200	3/14	0	0.0	0.0	0.7
Mingus Mountain	12R3	7100	3/14	0	0.0	0.0	0.7
Mormon Lake *	11R4	7350	3/14	13	5.5	0.0	4.4
Mormon Mountain	11R3-M	7500	3/14	19	8.0	0.0	6.4**
Munds Park	11R1-M	6500	3/14	T	T	0.0	2.2**
Newman Park	11P5-M	6750	3/14	T	0.1	0.0	---
Snow Bowl #1	11P4	10260	3/14	41	13.8	7.0	---
Snow Bowl #2	11P6	11000	3/14	64	21.4	13.9	---
White Spar	12R5	6000	3/14	0	0.0	0.0	---
White Horse Lake Jct.	12P2	7150	3/12	13	5.0	0.0	---
<u>LOWER COLORADO RIVER</u>							
Bill Williams Summit	12P4	8950	3/12	51	17.6	6.1	---
Bill " Intermediate	12P5	8550	3/12	44	14.4	2.0	---
Bright Angel	12N1	8400	----	--	----	----	10.2**
Chalender *	12P1-M	7100	3/14	4	1.6	0.0	2.8
Fort Valley	11P2	7350	3/14	7	2.9	0.0	2.1
Grand Canyon	11P1	7500	3/14	1	0.6	0.0	1.6
Williams Ski Run	12P3	7720	3/12	41	14.3	2.1	---
<u>LITTLE COLORADO RIVER</u>							
Baldy #2	9S15	9750	3/12	81	28.0	---	---
Baldy #3	9S16	10950	3/13	103	38.7	---	---
Baldy	9S1	9125	3/14	36	13.2	0.6	8.7**
Canyon Creek	10R7-M	7500	3/14	20	8.5	0.0	2.6**
Canyon Point	10R9	7600	3/14	23	9.6	0.0	---
Forest Dale	10R6	6430	3/14	0	0.0	0.0	0.4
Ft. Apache	9R5	9160	3/14	37	12.6	2.3	9.6**
Fort Valley	11P2	7350	3/14	7	2.9	0.0	2.1
Happy Jack *	11R5	7630	3/16	14	6.1	0.0	3.2**
Heber	10R4	7600	3/14	25	10.6	0.0	2.5**
Inner Basin #1	11P9	10100	---	--	---	---	---
Inner Basin #2	11P8	9750	---	--	---	---	---
Inner Basin #3	11P7	10250	---	--	---	---	---
McNary	9R2-M	7200	3/14	15	3.9	0.0	1.5
Mormon Lake	11R4	7350	3/14	13	5.5	0.0	4.4
Mormon Mountain	11R3-M	7500	3/14	19	8.0	0.0	6.4**
Nutrioso	9S4	8500	3/14	11	5.1	0.0	1.4
Snow Bowl #1	11P4	10260	3/14	41	13.8	7.0	---
Snow Bowl #2	11P6	11000	3/14	64	21.4	13.9	---
Wilson Lake *	9R6	9000	3/14	48	15.4	4.9	---

(a) 1948-62, 15 year period. (*) Adjacent drainage. (**) 1948-62 Adjusted Average. (A) Aerial observation: Water content estimated.

PRECIPITATION AT SELECTED ARIZONA STATIONS 1/

STATION	Precipitation (Inches)			
	February - 1968		Current Water Year (Oct. 1967 - Feb. 1968)	
	Total	Departure from Normal	Total	Departure from Normal
Alpine	.96	- .42	10.30	+ 3.52
Ash Fork	.37	- .78	4.89	+ 0.12
Clifton	1.50	+ .59	7.40	+ 3.12
Douglas Smelter	1.24	+ .65	7.08	+ 4.00
Flagstaff WBAS*	1.29	- .49	10.98	+ 3.20
McNary	1.10	- 1.04	15.92	+ 5.68
Payson Ranger Station	1.72	- .47	15.26	+ 6.20
Phoenix WBAS *	1.20	+ .35	7.31	+ 3.93
Prescott (City)	.69	- 1.25	10.49	+ 2.50
Springerville	.26	- .27	2.26	- .71
Tucson WBAS *	.99	+ .15	6.12	+ 2.28
Winslow WBAS *	.27	- .21	4.47	+ 2.02
Yuma WBAS *	.27	- .09	2.37	+ .80

1/ Data and Analysis furnished by Paul C. Kangieser,
Arizona State Climatologist, U. S. Weather Bureau,
ESSA, Tempe.

* WBAS = Weather Bureau Airport Station



PRECIPITATION

STORAGE GAGE DATA - ABOUT MARCH 15, 1968

Drainage Basin and Storage Gage	Elev.	Current Data		1948-62	From Approx.	11/1 to Date	% of Average
		Date of Mar. 1-15	Reading Precip.	Av. Precip.	This Year	1948-62 Average	

GILA RIVER

Silver Creek Divide	9000	3/15	3.87	---	25.17	---	---
Hannagan Meadows	9030	3/13	2.63	1.69*	16.98	12.22*	139%

SALT RIVER

Canyon Point	7600	3/14	2.48	---	22.58	---	---
Hannagan Meadows	9030	3/13	2.63	1.69*	16.98	12.22*	139%
Little Wildcat (Heber Snow Course)	7600	3/14	2.29	1.60*	21.80	12.57*	173%
Maverick Fork	9050	3/14	2.00	1.49*	16.94	10.70*	158%
Workman Creek **	6970	3/13	3.90	1.83	26.17	15.37	170%
Wilson Lake	9100	3/14	2.35	---	17.98	---	---

VERDE RIVER

Baker Butte	7300	3/11	2.24	---	24.52	---	---
Copper Basin Divide	6720	3/14	1.70	---	17.26	---	---
Fort Valley **	7350	3/14	.81	.92	11.16	8.08	138%
Happy Jack **	7480	3/16	1.50	1.34*	16.72	10.49*	159%
Mingus Mountain	7660	3/14	.59	1.06	18.64	9.06	206%
Mormon Mountain	7500	3/14	1.77	---	18.30	---	---

LITTLE COLORADO

Inner Basin #1	9830	---	---	---	---	---	---
Inner Basin #2	10050	---	---	---	---	---	---
Sheep Crossing (Baldy Snow Course)	9125	3/14	1.30	1.26*	14.16	9.61*	147%
Little Wildcat (Heber Snow Course)	7600	3/14	2.29	1.60*	21.80	12.57*	173%

* 1948-62 Adjusted Average

** Data supplied by U.S. Forest Service

ARIZONA SOIL MOISTURE - ABOUT MARCH 15, 1968

Drainage Basin and Station	1/ Station Number	Soil Profile in Inches			Date	Soil Moisture Content in Inches				Past Record
		Elev.	Depth	Cap.		1968	1967	1966	Avg.	
<u>GILA RIVER</u>										
Frisco Divide	8S1-M	8000	48	13.3	3/14	11.0	10.2	12.5	11.2	
<u>SALT RIVER</u>										
Black River Divide	9S10-*	9100	48	16.8	3/14	18.1	17.9	18.1	15.5	
Canyon Creek	10R7-M	7500	48	18.3	3/14	17.6	18.4	18.3	14.3	
Corduroy Creek	10R8-*	6000	36	13.5	3/14	13.8	9.4	13.8	8.6	
McNary	9R2-M	7200	48	16.3	3/11	13.7	15.8	17.9	14.2	
<u>VERDE RIVER</u>										
Mormon Mountain	11R3-M	7500	48	16.1	3/14	16.8	17.8	17.7	15.1	
Newman Park	11P5-M	6750	48	17.7	3/14	19.6	19.5	19.5	15.8	

1/ * - Soil Moisture Station Only
M - Snow Course and Soil Moisture Station

<u>SNOW COURSE</u>	<u>SNOW SURVEYOR</u>
Baker Butte-----	SCS
Baldy -----	SCS - Bill Cole
Bear Wallow-----	Forest Service - Carl Sollers
Beaver Head -----	N. A. Josh
Bill Williams Intermediate -----	Forest Service - Chuck Sheirer
Bill Williams Summit-----	Forest Service - Chuck Sheirer
Bright Angel -----	National Park Service - Bob Peterson
Camp Wood -----	Forest Service - Walter Richardson
Canyon Creek -----	SCS
Canyon Point -----	SCS
Chalender -----	Forest Service - M. E. Richards
Copper Basin Divide -----	SCS - Bill Gray
Coronado Trail -----	Forest Service - John Maeder
Crazy Horse -----	Forest Service - Art Maynard
Emory Pass -----	SCS - Bob Abercrombie
Forest Dale -----	Bureau of Indian Affairs - Raymond Endfield
Ft. Apache -----	SCS - Bill Cole
Fort Valley -----	Rocky Mountain Forest & Range Exp. Station
Frisco Divide -----	Forest Service - Joe Clayton
Gaddes Canyon -----	Paul G. Lidbeck
Grand Canyon-----	National Park Service
Hannagan Meadows-----	N. A. Josh
Happy Jack -----	Forest Service - Cifredo Gutierrez
Hawley Lake -----	Bureau of Indian Affairs - Raymond Endfield
Heber -----	SCS
High Peak-----	Forest Service - Art Maynard
Hummingbird-----	Ray Freeman
Ice King -----	James R. Wray
Inman -----	C. H. McCauley
Inner Basin #1, #2, #3 -----	SCS and USBR
Iron Springs -----	SCS - Bill Gray
Maverick Fork-----	SCS - Bill Cole
McKnight Cabin -----	Ray Freeman
McNary -----	Bureau of Indian Affairs - Raymond Endfield
Milk Ranch -----	Bureau of Indian Affairs - Raymond Endfield
Mingus Mountain -----	Paul G. Lidbeck
Mogollon -----	James R. Wray
Mormon Lake -----	SCS
Mormon Mountain -----	SCS
Mt. Ord -----	SCS and Salt River Project
Munds Park -----	SCS
Newman Park -----	SCS
Nutrioso -----	Forest Service - John Maeder
Redstone Trail-----	James R. Wray
Rose Canyon -----	Forest Service - Carl Sollers
Silver Creek Divide-----	James R. Wray
Smith Cienega -----	SCS and Salt River Project
Snow Bowl #1 -----	Forest Service - Angus Porter
Snow Bowl #2 -----	Forest Service - Angus Porter
State Line -----	Forest Service - Joe Clayton
White Horse Lake Junction -----	Forest Service - Chuck Sheirer
White Spar -----	SCS - Bill Gray
Whitewater -----	Ray Freeman
Williams Ski Run -----	Forest Service - Chuck Sheirer
Willow Ranch -----	Frank M. Jackson
Wilson Lake-----	SCS - Bill Cole
Workman Creek-----	Rocky Mountain Forest & Range Exp. Station

The Following Organizations Cooperate in the Arizona Snow Survey Work

FEDERAL

Department of Agriculture
Soil Conservation Service
Forest Service
 Apache Forest
 Coconino Forest
 Coronado Forest
 Gila Forest
 Kaibab Forest
 Prescott Forest
 Rocky Mountain Forest and Range Experiment Station
 Tonto Forest

Department of Commerce
 Weather Bureau
 Arizona Section

Department of Interior
 Bureau of Reclamation
 Region III
 Geological Survey
 Arizona District
 Bureau of Indian Affairs
 Fort Apache Reservation
 Son Carlos Irrigation Project
 National Park Service
 Grand Canyon National Park

Gila Water Commissioner
 Safford, Arizona

STATE

University of Arizona
 Arizona Agricultural Experiment Station
 Water Resource Research Center

IRRIGATION PROJECTS

Salt River Valley Water Users' Association
 Phoenix, Arizona
Son Carlos Irrigation and Drainage District
 Coolidge, Arizona

PRIVATE

Southwest Forest Industries, Inc.
 McNary, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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